



# Quality Control Systems for Water Testing Laboratories

## Minutes of meeting in Consultative Committee, ANSA

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**Venue:** ANSA Kabul, 3<sup>th</sup> February 2015 at 10:00- 13:00

### **Purpose of meeting:**

- 1) To follow up decisions and actions as proposed in meeting in December 2014 to hold workshop and to make an action plan.
- 2) To discuss and adapt action plan as developed by two day workshop on QC in RuWatSIP, MRRD.

### **Agenda points:**

- 1) Welcome- Dir. Dr. Khateer, ANSA
- 2) Presentation – GIZ
- 3) Presentation - Chemonix
- 4) Comments - UNICEF
- 5) Presentation - DACAAR
- 6) Discussion
- 7) Agreed action

**Present:**

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25	Dr. Khateer	ANSA	Dep. Director		<a href="mailto:tech.ddg@ansa.gov.af">tech.ddg@ansa.gov.af</a>

This meeting was arranged on short notice, and it collided with a meeting at DACAAR on groundwater monitoring and aquifer recharge. Therefore many participants attending that important meeting were parented form attending the ANSA meeting.

# MINUTES FROM THE MEETING

## 1. Welcome by Deputy Dir. Dr. Khateer, ANSA.

Welcomed participants for the meeting to discuss action plan how to establish quality control systems for Water Testing Laboratories.

The director also commended the good work which had been done in the Quality Control Workshop the previous two days at MRRD where many constructive proposals has been put forward.

Furthermore:

- ANSA is fully committed to follow up the work of Quality Control which has now been initiated.
- ANSA appreciate the commitment shown by other organizations on this issue. This is not the work for one organization.
- Establishment of Quality Control System is not meant to be a policing system, but a system to raise the quality of the results from the labs so the output is trustworthy.
- ANSA will want to set and test out the ideas presented to the Consultative Committee for adaptation.

### New Feed lab

ANSA has now received support to develop a food testing lab. This lab is for regular testing of food imported or exported to/from Afghanistan. The lab will be for certification of food, and priority will be given for export.

Through support of USAID, a GAP analysis has been done to assess what is needed of physical interventions and technical assistance in order to make the lab operational.

- 1) Within one year the plan is to establish the a functional food laboratory at ANSA
- 2) The mid term plan ( 2 years +) will focus on building capacity of the lab so as to apply for accreditation.

The urgent need for ANSA is to make the lab operational and to build capacity to run the lab. This seems to be the problem in the sector, - lack of capacity. Problems have often arisen with lack of coordination of activities and projects. Another problem is that ANSA staff are not currently certified to run the laboratories. This is important and need to be rectified.

### **Limited resources- better coordination - important to share resources**

The director emphasised that resources for operating laboratory facilities are inadequate. We can do better if we share resources.

We can and must share expertise and learn from each other.

- Important to have specific training program.
- Important to trust work and results from labs
- Important to have adequate SOPs
- Important to have quality plans.

### **Certified persons:**

We need to have trained and certified staff. This will help our clients trust our work/ results.

### **ANSA will prioritise:**

- Lead and coordinate whole sector
- Supervise sector
- To have certified lab within 1-2 years.

ANSA is in the process of planning reform. Resources are limited. Have difficulties with costs. The director mentioned that the same afternoon he would attend the Supreme Council to discuss making laboratory testing a priority.

To summarise:

ANSA is fully committed to the quality control process

Director asked all for the meeting to prioritise given that not too many resources are available. Necessary to move forward step by step.

Need to have one good lab to help other labs. ( reference lab)

## **2. Presentation by GIZ. ( Zeenat Nisa)**

GIZ is currently assisting AUWSSC to establish a laboratory and training the staff in operating the lab following national parameters using ISO analytical standard procedures and certify staff for quality control.

Plan for training with MEW covering quality control, calibration, making standard solutions etc. Zeenat ( Presenting) stated that the instrument need to be calibrated regularly.

Challenge with the work is lack of capacity with respect to irrelevant educational degrees and knowledge in laboratory staff, resources available in the country and lack of adequate budget.

### **3. Presentation by Chemonix**

Chemonix is engaged by USAID to provide support to ANSA to establish the food laboratory. The gap analysis has been done and work is in progress to establish the laboratory and to make this fully operational in short and long term.

All training will be in line with ISO 17025 which covers requirements for accreditation of laboratories.

Chemonix are already preparing SOPs, procedures and all documents required for the laboratory.

As part of the food laboratory there is also areas covering water analysis which makes it possible for ANSA and new trained staff to assist and work with Quality Control system for water testing laboratories as discussed in this meeting.

The project will focus on both basic and advanced training of staff.

Chemonix expressed scope for cooperation and that they could provide support to ANSA to facilitate for further development and coordination for water testing laboratories establishment for quality control systems.

### **4. Comments by UNICEF, L. Katsi**

UNICEF is concerned with the process here discussed. This is important issue and topic. It is essential to work with teams who know how to do the analysis correctly. We need to trust the results and we also need to focus on what to do next when we have received the results.

UNICEF has signed an MOU with the government to make and implement a WATER SAFETY PLAN.

### **5. DACAAR laboratory.**

DACAAR has an active laboratory analysing water samples continuously. Analysis are based on using field kits.

Training: Focus again on training using field kits. Training courses have been developed by DACAAR and their Canadian partner CAWST. Training material is currently being updated.

Can share with all participants covering sampling and analysis.

In 2014, DACAAR was able to produce many SOPs.

Need support to resolve challenges such as calibration of equipment, spectrophotometers, balances etc. Also need to have access to standard solutions which is not available today as is the case for most laboratories in Afghanistan today.

## 6. Discussions.

There were owners and staff from many different laboratories in the meeting. To some extent, this could broadly categorise the labs into two types based on type of analytical equipment used:

- 1) Type Labs using ISO analytical standards/ equipment
- 2) Type Labs using field kits

The majority of test are probably conducted using field kits. There are fast methods giving quick results of important advisory value. Kits may not be as precise in the analysis such as reporting results of  $5 \pm 0.5 \frac{\text{mg}}{\text{l}}$ . The ISO analytical technique may be reported as  $5 \pm 0.1 \frac{\text{mg}}{\text{l}}$ . For advice on action, kits may be valuable, cost effective, but of limited use if issues of legal implications are in questions. However, it was agreed that both types of laboratories are needed. We only had to make sure that when results were presented, a standard report format was used providing information of the client of precision, detection limit and method used for analysis used for analysis.

Certified training system.

Stoveland showed example of a Certified Training System which GIS/USAID has supported the Arab Countries on Water Activities (ACWUA) has made very effective impact in Arab countries. The system is based on:

- Training ( syllabus for different courses standardised/ defined)
- Test
- Issue of certificates (successful candidates)

This system could also fit in Afghanistan. Already developed training material may be adapted for use. Then tests and certificates could be agreed in ANSA + with the advice of Consultative Committee. This would facilitate that different actors could participate in training as they do now, but forming part of a national standard training framework.

## 7. Agreed point of action – next steps.

### 7.1. Certified training

It was agreed that certified training should be developed.

GIS and DACAAR already have material which would be used for harmonised training.

A national certification system should include all aspect of the water testing laboratory.

ANSA also requested focus to be given to Training of Trainers.

## 7.2. Coordination

ANSA agreed to facilitate regular monthly meetings with laboratory staff to continue develop/ harmonising procedures, checklists, reporting formats, training courses, and technical issues for follow up.

Action: Nazarullah Sharzad./ Support Chemonix.

## 7.3. Intercalibration

ANSA can facilitate with the support of its food lab. Within 6 months send out first sample for testing containing say 5 basic parameters. Start to view results as advisory, for certification of labs. GIZ indicated that they could prepare the first sample for inter-calibration within the next 2 months.

Zeenat could discuss with ANSA/Norplan which parameters were to be included in the first test.

The first test was proposed to be view as for training purpose only and results will be confidential for internal use only to address areas in need of support/ quality control.

## 7.4. Prepare and share standard solutions .

Many laboratories do not have access to standard solutions for internal quality control. Both GIZ and ANSA (Chemonix) indicated that they would assist in preparing standard solutions since they had facilities to do so.

Action: GIZ / Chemonix

## 7.5. ANSA to assist in clearance of laboratory chemicals.

ANSA was requested to support laboratories importing chemicals used for water analysis. Many of the chemicals had very short life and often for laboratories importing chemicals, time taken for importation took too long. Actually, many reported that the chemicals already has expired by the time they arrived in Afghanistan. In order to remedy this, ANSA was asked to assist lab owners with support of documentation which would speed up clearance of chemicals with the custom department.

Action: ANSA

## 7.6. Training how to calibrate instruments.

It was requested from some laboratories that training was needed. ANSA / Chemonix said they would look into how they could help. First the survey which was

started by Zeenat /CIZ could be completed so as to assess what type of equipment required calibration and how the training should be prepared.

Action: ANSA.

#### 7.7. Preparation of standard operating procedures. .

GIZ, Chemonix, DACAAR and perhaps others are currently involved in developing SOPs for their laboratory procedures. It will be good that this work can be coordinated and shared.

ANSA with Chemonix and GIZ could take initiative to finalise status of available SOPs and how they can benefit and be used within a national framework for laboratories of different category and standards.

Action: GIZ/ Chemonix

#### 7.8. Define certification system for laboratories in Afghanistan

Develop a certified system which allows for different levels of equipped labs to operate thus under a quality control system. Many labs use field kits, which should be allowed to continue, but in reporting of results, accuracy and method of analysis should follow the analytical report including detection limit of instruments.

Action: ANSA

Reporting: S. Stoveland, Norplan, [sst@asplanviak.no](mailto:sst@asplanviak.no)

ENCLOSED:

- Outputs and recommendation from Quality Control Workshop conducted at MRRD the two days prior to the Consultative Meeting at ANSA. (some of the challenges outlined in the attached documents makes it easier to appreciate the challenges laboratory personnel are facing.)

Log in:

[http://www.norplan.af/Page\\_Training\\_4\\_completed.html#QC\\_Worshop2](http://www.norplan.af/Page_Training_4_completed.html#QC_Worshop2)

Here is both the Mitigation Plan and Action plan.

Minutes will also be included together with other ANSA minutes of Meeting held earlier.:

[http://www.norplan.af/Page\\_Coord\\_WaterLabs\\_QC\\_ANSA.html](http://www.norplan.af/Page_Coord_WaterLabs_QC_ANSA.html)



